# PROCEEDINGS OF THE
# ROYAL ENTOMOLOGICAL SOCIETY
# OF LONDON

## SERIES C. JOURNAL OF MEETINGS

VOLUME 14. No. 8, 1949

## ORDINARY MEETING

WEDNESDAY, 5TH OCTOBER, 1949, at 5.30 p.m.

### AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 7th September, 1949.
2. Recommendations of candidates for Fellowship.
3. Announcement of election of new Fellows.
4. Additions to the Library.

*Presented.*

Baerg, William J. *Introduction to applied entomology.* 3rd edition. 4to. Minneapolis. 1949. [The Publishers.]

Brinck, Per. *Results of the Norwegian Scientific Expedition to Tristan da Cunha,* 1937–1938. *No.* 17. *Coleoptera of Tristan da Cunha.* 8vo. Oslo. 1948. [Det Norske Videnskaps-Akademi.]

Embry, B., and Youden, G. H. *The butterflies and moths found in the Dover and Deal district of Kent.* 8vo. Dover. 1949. [The Authors.]

Lizer y Trelles, Carlos A. *Curso di Entomologia. Parts I and II.* 8vo. Buenos Aires. 1947–1948. [Capt. K. J. Hayward.]

Riddelsdell, H. J., Hedley, G. W., and Price, W. R. *Flora of Gloucestershire.* 8vo. Cheltenham. 1948. [Mr. T. Bainbrigge Fletcher.]

Wadey, H. J. *The bee craftsman: a short guide to the life-story and management of the honey-bee.* 5th edition. 8vo. Petts Wood. 1949. [The Publishers.]

Whitehouse, R. H., and Grove, A. J. *The dissection of the cockroach.* 8vo. London. 1949. [The Publishers.]

*Purchased.*

Frankenberg, G. von. *Die Schmetterlinge.* 8vo. Hanover. 1946.

Ghidini, G. M. *Glossario di Entomologia.* 12mo. Brescia. 1949.

Scheerpeltz, O., and Winkler, A. *Die Tierwelt Mitteleuropas* 5 (XII). *Coleoptera.* 8vo. Leipzig. [1930.]

Stitz, H. *Die Tierwelt Mitteleuropas* 6 (XIV). *Neuroptera.* 8vo. Leipzig. [1927.]

Ulmer, Georg. *Die Tierwelt Mitteleuropas* 4 (III). *Ephemeroptera.* 8vo. Leipzig. [c. 1930.]

Ulrich, W. *Die Tierwelt Mitteleuropas* 5 (XIII). *Strepsiptera.* 8vo. Leipzig. [1930.]

Thurner, Josef. *Die Schmetterlinge Kärntens und Osttirols.* 8vo. Klagenfurt. 1948.

Zimmerman, Elwood C. *The insects of Hawaii.* 5 vols. Large 8vo. Honolulu. 1948.

In addition separates have been presented by the Smithsonian Institution, Department of Tsetse Research, Shinyanga, Mr. D. S. Kettle, the Transvaal Museum, United States Department of Agriculture, Mr. J. B. Corporaal, Rothamsted Experimental Station, the Royal Society, Mr. R. G. Webster Kay, Mr. R. G. Davies, Mr. M. Niblett, Lt.-Col. F. C. Fraser, The American Entomological Society, Capt. E. Rivenhall Goffe, Companhia de Diamentes de Angola, Dr. David Miller and Dr. Waloff.

5. Admission of Fellows.
6. Exhibits.

**Fellows are particularly requested to bring suitable exhibits to the Meeting even though it may not be possible to announce their intention to do so beforehand.**

*Note.*—To avoid congestion in the Library and to enable exhibits to be displayed to greater advantage, a table has been placed in the meeting room for this purpose. Fellows are asked to place their exhibits on this table, with a suitable explanatory note, as soon as possible on the afternoon of the meeting, so that they are available for inspection there before the meeting opens.

7. Communications.

(1) **Mr. J. W. S. Pringle** (a visitor).

The function of the halteres of Diptera.

[ABSTRACT]

The functioning of the halteres of Diptera as a sense organ of equilibrium has been established by a detailed examination of the structure and physiology of these organs. The properties of the haltere can be deduced from a consideration of the dynamics of an oscillating rod and from the known function of campaniform and chordotonal sensilla, and the conclusions have also been verified by direct oscillographic analysis of the impulses in the haltere nerve.

(2) **Dr. Skat Hoffmeyer.**

Problems in Danish Macrolepidoptera.

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TEA will be served in the Library before the meeting.

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## ADMISSION OF FELLOWS

**Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-laws and attends the meeting on 5th October, 1949, is requested to inform the Secretary before 5.15 p.m. on that date.**

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## PROCEEDINGS OF THE ORDINARY MEETING HELD ON 7TH SEPTEMBER, 1949.

Mr. C. L. Collenette, member of Council, in the Chair.

Present, 52 Fellows and 9 Visitors.

The minutes of the Ordinary Meeting held on 6th July, 1949, were confirmed and signed by the acting President, subject to a correction in the names of Fellows who signed the Obligation Book to read as follows: R. L. Usinger, R. C. H. Sweeney, C. M. Jones and A. de Porochin.

The names of the following candidates for election were read for the first time: L. C. Adkins, R. F. Benson, D. S. Bertram, R. A. L. Dibb, A. A. Granovsky, J. L. Gregory, B.Sc., Dipl.Agr.Sci., Commander L. H. T. Hollebone, R.N., W. E. Stanley Merrett, O.B.E., B.A., B.M., B.Ch., Marion R. Smith, A. Taylor, I. E. Whitehead and Prof. Merle W. Wing, B.S.

For the second time: F. M. J. Carpentier, R. Levi-Castillo, E. J. Ebeyer Slythe and I. Thomas.

The Secretary read the names of the following newly elected Fellows of the Society: S. N. A. Jacobs, 54, Hayes Lane, Bromley, Kent; C. C. Hattingh, Pest Control and Crop Protection (S.A.) Ltd., Rembrandt Buildings, Bird Street, Stellenbosch, S. Africa; F. C. Hatwell, Lower Spie Cott, Chittlehamholt, Umberleigh, N. Devon; I. Lansbury, 50A, Alston Road, Barnet, Herts.

Thanks were voted to donors of gifts to the Library since the last meeting.

Mr. B. L. J. Byerley, Dr. V. M. Dirsh, Mr. W. H. Dowdeswell, Mr. I. Lansbury and Mr. D. Leston signed the Obligation Book and were admitted Fellows of the Society.

The following papers, accepted for publication in the *Transactions*, were read in title:

"The structure and maturation of the ovaries in British ACRIDIDAE (Orthoptera)," by J. Phipps.

"Studies in the genus *Philonthus* Stephens (Coleoptera)," by C. E. Tottenham.

The Honorary Secretary exhibited a series of coloured post cards illustrating the Lepidoptera of the Engadine, and giving the local Romansh dialect name in each case.

Mr. R. W. Lloyd exhibited a series of males of the rare British Beetle *Apion sorbi* F. (*laevigatum* Paykull), taken by him this year at Treago Castle, Herefordshire; also a series of *Pyrrhidium sanguineum* L. which he had taken this year in an old oak tree at Moccas Park, Herefordshire. He said he did not think the species had been recorded in this country in the last hundred years.

Dr. F. I. van Emden exhibited puparia of the Muscid fly, *Ochromusca trifaria* Bigot, attached in a row to the inside of a shell of *Achatina craveni* Smith, the species-name of which snail was kindly supplied by Dr. W. J. Rees, of the British Museum (Natural History). Adults bred by Capt. W. A. Lamborn at Fort Johnston, Nyasaland, from these puparia were also shown, and the following extracts read from Capt. Lamborn's letter: "I became aware of the existence of these parasites, the larvae of which may be found in the living snail, some years ago when a friend sent me a shell, asking my opinion as to the nature of the puparia, which happened to be empty. However, there was no difficulty in finding infested snails, and I sent a good series of the imago to . . . My interest was revived some little time ago from learning that the United States authorities had become concerned by the increase of *Achatina* [*fulica* Férussac, F.v.E.] on the island of Guam [and generally in the Pacific area, F.v.E.], and were seeking natural controls. . . . Further material could be readily obtained at the proper season, i.e., towards the end of the rains when the snails are in evidence. I could secure a series of the flies readily enough, even in the dry season, for they tend to congregate in well-shaded places in certain localities."

Professor E. C. Zimmerman, a visitor, said that in the Hawaiian islands, in spite of extensive research, no satisfactory check on *Achatina* had been found, the risk of introduced predators spreading to the detriment of the indigenous molluscan fauna being one that could not lightly be taken.

Dr. van Emden also exhibited living eggs and adults of *Cryptocephalus moraei* L. and *hypochoeridis* L., pointing out the greatly different egg-cases in these two species of one genus, those of *C. moraei* being simply globular, whilst those of *hypochoeridis* had somewhat the shape of a widely opened pine-cone or the tip of a moss plant and therefore appeared much larger.

Dr. B. P. Uvarov exhibited a living female stick insect belonging to the New Zealand genus *Clitarchus*, a new addition to the list of British established insects. He said it was found by Major A. A. Dorrien-Smith in the gardens of Tresco Abbey, Scilly Isles.

Dr. Hall, who had recently visited both Zanzibar and Pemba Island in connection with plans designed to control the outbreak of Sudden Death Disease in Cloves there, gave a résumé of the present position, based on the abstract already published on pp. 26–27.

In the discussion which followed, Dr. F. M. L. Sheffield, a visitor, of the Clove Research Organization, Zanzibar, said that sudden death disease of clove trees had been present, in her opinion, for a considerable number of years, but there was no convincing evidence that it was the cause of the mass mortality of trees noted from time to time in the past. "Die-back" trees frequently escaped sudden death, possibly because the accompanying breaking of the canopy normally formed by the tree tops helped to retard the spread of the disease. A mycologist who had been appointed to investigate the problem some years ago had suggested that it might be due to a root fungus, but confirmation of this was lacking. The Pemba outbreaks in 1948 clearly indicated that the disease was infectious, but fungi are found equally readily in the roots of both healthy and unhealthy trees. She thought that the remarkable freedom of clove trees from insect pests, to which Dr. Hall referred, was possibly due to the ant, *Oecophylla*, which was very intolerant of other insects. She did not herself think that the ant alone could be reponsible for the spread of the disease, as, if that were so, it should be possible to transmit it mechanically. She concluded by saying that she was hopeful about controlling the disease in Zanzibar eventually.

Captain T. D. Dannreuther said that in the course of anti-slave trade duties on the East African coast, in 1888–89, he had been struck by the fact that many of the slaves who got ashore died in their first year in the clove plantations. Those who survived that period were said to become immune. The death of the slaves was thought then to be due to rain water soaking through the clove trees being rendered poisonous by the absorbed acid. He asked whether there was a high mortality rate among the present-day plantation labourers.

Miss Longfield inquired whether planting was now being done in such a way as to prevent interlocking of the trees, and Mr. C. J. Golledge asked to what extent the disease was prevalent in Madagascar. Dr. Hall replied that little was known of the clove industry in that locality, though trees were reported to suffer from "apoplexy," but it was perhaps significant that *Oecophylla* did not occur there. In spite of the prevalence of the disease in Zanzibar and Pemba, it was difficult to persuade the natives to change their planting methods so as to make the growth less dense.

In reply to an inquiry by Mr. E. O. Pearson as to whether it was possible to replant with impunity, Dr. Hall said that replanting was done promptly, and although the disease recurred it spread more slowly, to which Dr. Sheffield added that the mortality rate among seedlings was always high, and young trees were sometimes killed by "sudden death." She had noticed that the ants always left the trees after the disease had set in.

N. D. RILEY, *Honorary Secretary.*

The next meeting will be held on 2nd November, at 5.30 p.m.

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